SiC of high--

Please replace the first complete paragraph on page 8 with the following:

--Fig. 1 is a diagram showing a state where the single crystal SiC of the invention has not yet been heat-treated, i.e., the section structure of single crystal SiC according to a first aspect of the invention. In Fig. 1, 1 denotes a single crystal hexagonal α-SiC substrate (6H type). A polycrystalline β-SiC plate 2 which is produced by the thermal CVD method and which has a thickness of 1 mm is superimposed on a cutting plane 1a or the surface of the substrate.--

Please replace the last paragraph on page 9 with the following:

--Crystal X-ray analysis was conducted using an X-ray diffractometer on samples of the single crystal SiC which were grown in the manner described above. As a result, it was confirmed that the single crystal portion 4 grown in the polycrystalline β-SiC plate 2 is single crystal α-(6H)-SiC which has the crystal orientation of the orientation of--

REMARKS

Rejection

Claims 1-10 are pending. These have been rejected as follows:

1) Claims 1 and 2 under the judicially created doctrine of obviousness-type double patenting over claims 1-3 of U.S. Patent No. 6,187,279; and

2) Claims 1-10 under 35 USC 103(a) over Tanino et al (6,187,279)

Regarding 1), applicants are submitting herewith a terminal disclaimer thereby obviating this rejection.

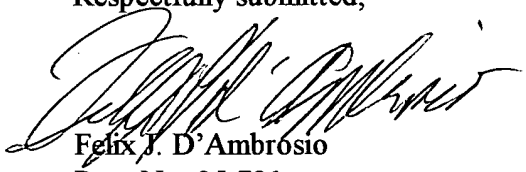
The rejection under 35 USC 103(a) is respectfully traversed.

The invention claimed and that disclosed in the '279 patent both have an α-SiC

substrate and a polycrystalline β-SiC plate. The similarity stops there. According to the present invention, the cutting occurs along at different Miller index planes. The superimposed substrate and plane are heated in an inert gas atmosphere thereby forming a single crystal with a unique orientation relative to the cutting plane orientation. The '279 patent really is silent regarding the noted uniqueness. Without a teaching in some way associated with the noted uniqueness it is not seen how the '279 patent can render claims 1-19 unpatentable under 35 USC 103.

In view of the foregoing, reconsideration and re-examination are respectfully requested and claims 1-10 found allowable.

Respectfully submitted,



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July 1, 2002

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MARKED-UP COPY OF LAST TWO PARAGRAPHS ON PAGE 4 OF SPECIFICATION

--In order to attain the above-mentioned object, the single crystal SiC according to a first aspect of the invention [set forth in claim 1] is characterized in that heat treatment is performed in an inert gas atmosphere under a state where a cutting plane of a single crystal α-SiC substrate which is formed by cutting along (1, 1 $\bar{2}$ 0) Miller index plane $\pm$ 10°, and (2 2 0) Miller index plane of a polycrystalline β-SiC plate are superimposed on each other, whereby single crystal having a crystal orientation of an orientation of the cutting plane is integrally grown in the polycrystalline β-SiC plate in conformity with the single crystal α-SiC substrate.

The method of growing single crystal SiC according to a second aspect of the invention [set forth in claim 3] is characterized in that, under a state where (2 2 0) Miller index plane of a--

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--In the thus configured first and second aspects of the invention[s set forth in claims 1 and 3], a state where the crystal growing conditions in the interface plane are substantially uniformalized, and micropipes of the single crystal α-SiC substrate are not transferred or converted to distortion is obtained by superimposing the planes in which arrangements of Si atoms and C atoms are identical, i.e., the cutting plane along the (1 1 $\bar{2}$ 0) Miller index plane $\pm$ 10° of the single crystal α-SiC substrate, and the (2 2 0) Miller index plane of the polycrystalline β-SiC plate, and heat treatment is then conducted in an inert gas atmosphere. As a result, solid phase growth in which the whole region of the interface plane of the polycrystalline β-SiC plate is converted substantially simultaneously and rapidly to α-SiC can be performed. Therefore, it is possible to grow single crystal which is free not only micropipes but also from distortion and residual grain boundaries due to uneven crystal growth rates, so that single crystal SiC of--

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--In the method of growing single crystal SiC according to the second aspect of the invention [set forth in claim 3], each of at least one cutting plane of the single crystal α-SiC substrate, and at least one (2 2 0) Miller index plane of the polycrystalline β-SiC plate may be processed into a smooth mirror face of 10 angstroms RMS or less. According to this configuration, the planes can be closely contacted with each other without leaving a gap therebetween. Therefore, single crystal SiC of high--

MARKED-UP COPY OF FIRST COMPLETE PARAGRAPH ON PAGE 8 OF SPECIFICATION

--Fig. 1 is a diagram showing a state where the single crystal SiC of the invention has not yet been heat-treated, i.e., the section structure of single crystal SiC according to a first aspect of the invention. In Fig. 1, 1 denotes a single crystal hexagonal α-SiC substrate (6H type). A polycrystalline β-SiC plate 2 which is produced by the thermal CVD method and which has a thickness of 1 mm is superimposed on a cutting plane 1a or the surface of the substrate.--

MARKED-UP COPY OF LAST PARAGRAPH ON PAGE 9 OF SPECIFICATION

--[The inventors conducted crystal] Crystal X-ray analysis was conducted using an X-ray diffractometer on samples of the single crystal SiC which were grown in the manner described above. As a result, it was confirmed that the single crystal portion 4 grown in the polycrystalline β-SiC plate 2 is single crystal α-(6H)-SiC which has the crystal orientation of the orientation of--